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<110> F. Hoffmann-La Roche AG

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<151> 2004-04-14

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cccactcgtg caccctaactg atcttcagca tcttttactt tcaccagcgt ttctgggtga 7260
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agcggataca tatttgaatg tatttagaaa aataa caaa taggggttcc ggcacattt 7440
ccccgaaaag tgccacctga cgtc 7464

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<210> 3

<211> 1113

<212> DNA

<213> Artificial sequence

<220>

<223> DNA for mutated IL-15/Fc with CD5 leader

<400> 3

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atgcccattg ggtctctgca accgctggcc acctgtacc tgctggggat gctggtcgct 60
tcctgcctcg gaaactgggt gaatgtaata agtgatttga aaaaaattga agatcttatt 120
caatctatgc atattgatgc tactttatat acggaaagtg atgttcaccc cagttgcaaa 180
gtaacagcaa tgaagtgcct tctcttgag ttacaagtta ttccacttga gtccggagat 240
gcaagtattc atgatacagt agaaaatctg atcatcctag caaacaacag ttgtcttct 300
aatgggaatg taacagaatc tggatgcaaa gaatgtgagg aactggagga aaaaaatatt 360
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aaatctgctg acaaaactca cacatgccca ccgtgccag cacctgaact cctgggggga 480
ccgtcagtct tcctcttccc cccaaaaccc aaggacaccc tcatgatctc ccggaccct 540

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```

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ctggactccg acggctcctt cttcctctac agcaagctca ccgtggacaa gagcagggtg     1020
cagcagggga acgtcttctc atgctccgtg atgcatgagg ctctgcacaa ccactacacg     1080
cagaagagcc tctccctgtc tccgggtaaa tga                                     1113

```

<210> 4

<211> 370

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acid sequence of human CRB-15 with CD5 leader

<400> 4

```

Met Pro Met Gly Ser Leu Gln Pro Leu Ala Thr Leu Tyr Leu Leu Gly
1           5           10           15

```

```

Met Leu Val Ala Ser Cys Leu Gly Asn Trp Val Asn Val Ile Ser Asp
20           25           30

```

```

Leu Lys Lys Ile Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr
35           40           45

```

```

Leu Tyr Thr Glu Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met
50           55           60

```

```

Lys Cys Phe Leu Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp
65           70           75           80

```

```

Ala Ser Ile His Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn
85           90           95

```

Ser Leu Ser Ser Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys
 100 105 110

Glu Glu Leu Glu Glu Lys Asn Ile Lys Glu Phe Leu Asp Ser Phe Val
 115 120 125

His Ile Val Asp Met Phe Ile Asn Thr Ser Asp Pro Lys Ser Ala Asp
 130 135 140

Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly
 145 150 155 160

Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile
 165 170 175

Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser His Glu
 180 185 190

Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His
 195 200 205

Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg
 210 215 220

Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys
 225 230 235 240

Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu
 245 250 255

Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr
 260 265 270

Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu
 275 280 285

Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp
 290 295 300

Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val
 305 310 315 320

Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp
 325 330 335

Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His

340

345

350

Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro
 355 360 365

Gly Lys
 370

<210> 5

<211> 371

<212> PRT

<213> Artificial sequence

<220>

<223> Amino acid sequence of murine IL-15/Fc (human mutated IL-15,
 murine IgG2A) with CD5 leader

<400> 5

Met Pro Met Gly Ser Leu Gln Pro Leu Ala Thr Leu Tyr Leu Leu Gly
 1 5 10 15

Met Leu Val Ala Ser Cys Leu Gly Asn Trp Val Asn Val Ile Ser Asp
 20 25 30

Leu Lys Lys Ile Glu Asp Leu Ile Gln Ser Met His Ile Asp Ala Thr
 35 40 45

Leu Tyr Thr Glu Ser Asp Val His Pro Ser Cys Lys Val Thr Ala Met
 50 55 60

Lys Cys Phe Leu Leu Glu Leu Gln Val Ile Ser Leu Glu Ser Gly Asp
 65 70 75 80

Ala Ser Ile His Asp Thr Val Glu Asn Leu Ile Ile Leu Ala Asn Asn
 85 90 95

Ser Leu Ser Ser Asn Gly Asn Val Thr Glu Ser Gly Cys Lys Glu Cys
 100 105 110

Glu Glu Leu Glu Glu Lys Asn Ile Lys Glu Phe Leu Asp Ser Phe Val
 115 120 125

His Ile Val Asp Met Phe Ile Asn Thr Ser Asp Pro Arg Gly Pro Thr

130	135	140
Ile Lys Pro Cys Pro Pro Cys Lys Cys Pro Ala Pro Asn Leu Leu Gly 145 150 155 160		
Gly Pro Ser Val Phe Ile Phe Pro Pro Lys Ile Lys Asp Val Leu Met 165 170 175		
Ile Ser Leu Ser Pro Ile Val Thr Cys Val Val Val Asp Val Ser Glu 180 185 190		
Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn Val Glu Val 195 200 205		
His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn Ser Thr Leu 210 215 220		
Arg Val Val Ser Ala Leu Pro Ile Gln His Gln Asp Trp Met Ser Gly 225 230 235 240		
Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro Ala Pro Ile 245 250 255		
Glu Arg Thr Ile Ser Lys Pro Lys Gly Ser Val Arg Ala Pro Gln Val 260 265 270		
Tyr Val Leu Pro Pro Pro Glu Glu Glu Met Thr Lys Lys Gln Val Thr 275 280 285		
Leu Thr Cys Met Val Thr Asp Phe Met Pro Glu Asp Ile Tyr Val Glu 290 295 300		
Trp Thr Asn Asn Gly Lys Thr Glu Leu Asn Tyr Lys Asn Thr Glu Pro 305 310 315 320		
Val Leu Asp Ser Asp Gly Ser Tyr Phe Met Tyr Ser Lys Leu Arg Val 325 330 335		
Glu Lys Lys Asn Trp Val Glu Arg Asn Ser Tyr Ser Cys Ser Val Val 340 345 350		
His Glu Gly Leu His Asn His His Thr Thr Lys Ser Phe Ser Arg Thr 355 360 365		
Pro Gly Lys 370		